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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,264	03/04/2002	Jianbo Lu	200-1749	6453

7590

08/23/2002

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EXAMINER

MARC COLEMAN, MARTHE Y

ART UNIT

PAPER NUMBER

3661

DATE MAILED: 08/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,264

Applicant(s)

LU ET AL.

Examiner

Marthe Y Marc-Coleman

Art Unit

3661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____.

DETAILED ACTION

1. This is a first office action in response to Application No. 10/091,264 filed on March 04, 2002 in which claims 1-14 are presented for examination.

Claim Objections

2. Claims 3-9 are objected to because of the following informalities:

In regard to claim 3, on line 4, "an roll" should be replaced by - -a roll- -.

Claim 4, line 4 delete either "said or the";

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are indefinite because:

- a. "said first angular rate signal" lacks proper antecedent basis in claim 3, line 26;
- b. "said second angular rate signal" lacks proper antecedent basis in claim 3, lines 26-27.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Schiffmann (U.S. Patent No. 6,192,305).

In regard to claim 1, Schiffmann discloses a control system for an automotive vehicle having a vehicle body comprising:

- a first angular rate sensor generating a first angular rate signal corresponding to a first angular motion of the vehicle body (see abstract and col. 2 lines 1-67);
- a second angular rate sensor generating a second angular rate signal corresponding to a second angular motion of the vehicle body (see abstract and col. 2 lines 1-67);
- a lateral accelerometer generating a lateral acceleration signal corresponding to a lateral acceleration of a center of gravity of the vehicle body (see abstract and col. 2 lines 1-67);
- a longitudinal accelerometer generating a longitudinal acceleration signal corresponding to the longitudinal acceleration of the center of gravity of the vehicle body (see abstract and col. 2 lines 1-67);
- a wheel speed sensor generating a wheel speed signal corresponding to a wheel speed of the vehicle (see abstract and col. 2 lines 1-67); and

- a controller coupled to said first angular rate sensor, said second angular rate sensor, said lateral accelerometer, said longitudinal accelerometer, and said wheel speed sensor, said controller determining a global roll attitude and a global pitch attitude from the first angular rate signal, and the second angular rate signal, lateral acceleration signal and the longitudinal acceleration signal, said controller determining a roll gradient based upon a past raw roll rate and current raw roll rate, the first angular rate signal or the second angular rate signal and the lateral acceleration signal, a pitch gradient based upon a past raw pitch rate and current raw pitch rate the first or the second angular rate signal and the longitudinal acceleration signal, determining a relative roll and relative pitch as a function of the roll gradient and the pitch gradient (see Figs. 1-3B and col. 3-7).

In regard to claims 3, 10-12, 14, Schiffmann discloses a control system for an automotive vehicle having a vehicle body comprising:

- a roll angular rate sensor generating a roll angular rate signal corresponding to a roll angular motion of the vehicle body (see abstract and col. 2 lines 1-67);
- a yaw angular rate sensor generating a yaw motion signal corresponding to a yaw motion of the vehicle body (see abstract and col. 2 lines 1-67);
- a lateral accelerometer generating a lateral acceleration signal corresponding to a lateral acceleration of a center of gravity of the vehicle body (see abstract and col. 2 lines 1-67);

- a longitudinal accelerometer generating a longitudinal acceleration signal corresponding to the longitudinal acceleration of the center of gravity of the vehicle body (see abstract and col. 2 lines 1-67);
- a wheel speed sensor generating a wheel speed signal corresponding to a wheel speed of the vehicle (see abstract and col. 2 lines 1-67); and
- a controller coupled to said roll angle rate sensor, said yaw angular rate sensor, said lateral accelerometer, said longitudinal accelerometer, and said wheel speed sensor, said controller determining a global roll attitude and a global pitch attitude from roll angle rate, lateral acceleration signal and the longitudinal acceleration signal, determining a pitch rate in response to said first angular rate signal, said second angular rate signal and said wheel speed signal, said controller determining a roll gradient based upon a past raw roll rate and current raw roll rate, the roll angular rate signal and the lateral acceleration signal; a pitch gradient based upon a past raw pitch rate and current raw pitch rate the calculated pitch angular rate signal and the longitudinal acceleration signal, determining a relative roll and relative pitch as a function of the roll gradient and the pitch gradient (see Figs. 1-3B and col. 3-7).

In regard to claim 2, Schiffmann discloses that said first angular rate sensor is a yaw rate sensor (see abstract).

In regard to claims 4-9 and 13, Schiffmann discloses a safety system, coupled to said controller, said controller generating a control signal to said safety system in response to the relative roll angle, the relative peach angle, the global roll and

the global pitch angle. Schiffmann also disclose that said safety system comprises an active brake control system, an active rear steering system, an active front steering system, an active anti-roll bar system, and an active suspension system (see col. 14 lines 26- 44).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marthe Y Marc-Coleman whose telephone number is (703) 305-4970. The examiner can normally be reached on Monday-Thursday from 9:30 AM - 8:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William A Cuchlinski can be reached on (703) 308-3873. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703) 305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Patent Examiner
Marthe Y. Marc-Coleman
Marthe Marc-Coleman

August 20, 2002